

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application Transmittal

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the **Patent Application** of:

Inventor: Olivier Foncarnier

For: A Method and System for Broadcasting Alarm Messages to Selected Users of an IP Network

Enclosed are:

- ☒ One (1) sheet of drawings.
- ☒ An assignment of the invention to International Business Machines Corporation, Armonk, New York 10504.
- ☒ A certified copy of a French application number 98480066.4 filed 10/8/98.
- ☐ An associate power of attorney.
- ☒ Declaration and Power of Attorney for Patent Application

The filing fee has been calculated as shown below:

(Col. 1)

(Col. 2)

Other Than Small Entity

For:	No. Filed	No. Extra
Basic Fee		
Total Claims	21-20 =	1
Indep. Claims	3 - 3 =	0
<input type="checkbox"/> Multiple Dependent Claim Presented		
Surcharge-Late Filing Fee or Oath or Declaration		

Rate	Fee
	\$760.00
x \$18.00=	\$18.00
x \$78.00=	\$.00
\$260.00	\$.00
Subtotal	\$778.00
\$130.00	\$.00
TOTAL	\$778.00

Deposit Account Authorization

- ☒ Please charge Deposit Account No. 09-0461 in the amount of \$778.00. A duplicate copy of this sheet is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 09-0461. A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 C.F.R. §1.16.
- ☒ Any patent application processing fees under 37 C.F.R. §1.17.

Date: September 28, 1999

Respectfully submitted,

By A. Bruce Clay
A. Bruce Clay
Attorney of Record
Registration No. 32,121
IBM Corporation
Intellectual Property Law
Dept. T81/Bldg. 062
P.O. Box 12195
Research Triangle Park, NC 27709
Telephone: 919-254-6717
Fax: 919-254-4330

EXPRESS MAIL CERTIFICATE

Express Mail Label Number: BJ353237355US
Date: September 28, 1999

I hereby certify that I am depositing the enclosed or attached paper with the U.S. Postal Service "Express Mail Post Office to Addressee" service on the above date, addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231.

Catherine M. Robbins
Catherine M. Robbins

A

Docket No. FR9-98-059

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Olivier Foncarnier

Serial No.:

Group No.:

Filed: Herewith

For: A Method and System for Broadcasting Alarm Messages to Selected Users of an IP Network

Assistant Commissioner of Patents
Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number: EJ353237355US

Date of Deposit: September 28, 1999

WE REQUEST THE DATE OF DEPOSIT AS THE DATE FILED.

I hereby certify that the following **attached** correspondence comprising:

1. Patent Application Transmittal (In duplicate)
2. Declaration and Power of Attorney
3. Recordation and Assignment
4. Preliminary Amendment (4 pages)
5. Patent Application (9 pages)
6. Drawings (1 sheet)
7. Certified Copy of French Application No. 98480066.4.
8. Business Reply Post Card

is being deposited with the United States Postal Service Express Mail Post Office to Addressee service under CFR 1.10 on the date indicated above and is addressed to:

**Assistant Commissioner of Patents
Washington, D.C. 20231**

Catherine M. Robbins
(Name of person mailing paper or fee)

Catherine M. Robbins
(Signature of person mailing paper or fee)

09/28/99
JC658 U.S. PTO

JC658 U.S. PTO
09/407738
09/28/99

09/28/99 - 09/28/99

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of : September 28, 1999
O. Foncarnier : IBM Corporation
Ser. : Dept. T81/Bldg. 062
Filed: Herewith : P.O. Box 12195
For: A Method and System : Res. Tri. Park, NC 27709
for Broadcasting Alarm Messages:
to Selected Users of An IP :
Network :

PRELIMINARY AMENDMENT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Prior to examination, please amend the application as follows:

In the Specification:

Page 2, after line 17, insert - - **Brief Description of the Drawing**

For a more complete understanding of the present invention and for further advantages thereof, reference is now made to the following Detailed Description taken in conjunction with the accompanying Drawing, in which:

The figure is a schematic block-diagram illustrating the present invention. - -.

Page 4, after line 18, insert - - Although the present invention has been described with respect to a specific preferred embodiment thereof, various changes and modifications may be suggested to one skilled in the art, and it is intended that the present invention encompass such changes and modifications as fall within the scope of the appended claims. - - .

In the Claims:

Please add the following new claims 15-21:

1 -- 15. A computer program product recorded on computer readable medium for broadcasting
2 alarm messages from a server to a list of users among a plurality of multi-platform users sharing
3 the server in a data transmission network operating under Internet Protocol (IP) and using Java
4 language, comprising:

5
6 computer readable means for creating a profile table containing profiles of each one of
7 said plurality of users; and

8 computer readable means for processing and for transmitting to enable an administrator
9 associated with said server to transmit alarm messages to the list of users wherein said users have
10 been selected from said profile table, said alarm messages being displayed on a screen of a
11 workstation associated with each selected user if said workstation is running.

1 16. The program product according to Claim 15, wherein said computer readable means for
2 processing and for transmitting comprise a processing unit operating under the control of a Java
3 alarm program and a message sender transmitting directly said alarm messages over said
4 network.

1 17. The program product according to Claim 16, wherein said alarm messages are written and
2 manually sent by the administrator when necessary.

1 18. The program product according to Claim 16, wherein said alarm messages previously
2 written by the administrator are automatically sent by said computer readable means for
3 processing and for transmitting at the occurrence of a condition or an event.

1 19. The program product according to Claim 18, wherein said alarm messages are automatically
2 sent when any specific resource monitored by a System Network Message Protocol (SNMP) via
3 a SNMP interface comes down or becomes unavailable.

1 20. The program product according to Claim 18, wherein said alarm messages are automatically
2 sent at the occurrence of an event scheduled in an alarm scheduler by said administrator.

1 21. The program product according to Claim 15, wherein said alarm messages are standalone
2 alarm functions used to detect when said server is out of work. - -

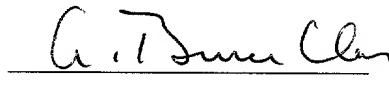
REMARKS

The Application has been amended to more distinctly claim Applicant's invention. No new matter has been entered.

Applicant has made a sincere effort to place this application in condition for allowance. Early notification of such allowance is respectfully requested. In the event an additional fee is required, please charge that fee to deposit account number 09-0461.

Date: September 28, 1999

Respectfully submitted,

A handwritten signature in cursive script, reading "A. Bruce Clay", written over a horizontal line.

A. Bruce Clay
Reg. No. 32,121
Attorney for the Applicants

Docket No. FR9-98-059
Phone: 919-254-6717
Fax: 919-254-4330

EXPRESS MAIL LABEL NO.: EJ353237355US DATE OF DEPOSIT: September 28, 1999

I hereby certify that this paper and fee are being deposited with the United States Postal Service Express Mail Post Office to Addressee service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231.

Catherine M. Robbins
NAME OF PERSON MAILING PAPER AND FEE

Catherine M. Robbins
SIGNATURE OF PERSON MAILING PAPER AND FEE

INVENTOR: Olivier Foncarnier

**A METHOD AND SYSTEM FOR BROADCASTING ALARM MESSAGES TO
SELECTED USERS OF AN IP NETWORK**

Technical field

The invention relates to the heterogeneous data transmission networks which can be shared by multi-platform users by means of a language tool of the Java type, and particularly to a system for broadcasting alarm messages to selected users of such a network.

Background

The data transmission network based upon the Internet Protocol (IP) is becoming a universal network used by more and more people in the world. Since the users interconnected by such a network were operating on different platforms, there was need for a language tool to allow the users to communicate together irregardless of the platform they were using. The Java language that emerged to meet this need is simple and can be easily programmed by most developers without

extensive programmer training while being attuned to current software practices. The Java language is object oriented to take advantage of modern software development methodologies and to fit into distributed user-server applications. It is also multithreaded for high performance in applications that need to perform multiple concurrent activities such as multimedia.

5 The Java language is designed to support applications that are deployed into heterogeneous network environments wherein the application must be capable of executing on a variety of hardware architectures. Within this variety of hardware platforms, the applications can execute atop various operating systems (OS/2, Windows 95, Windows NT, AIX, etc.) and interoperate with multiple programming language interfaces.

10 Nevertheless, despite the powerful performance of the Java language, there is at present no tool that enables information or an alarm message to be forwarded from a server and to be displayed to one or more users operating on different platforms while these users are running an application.

Summary of the Invention

15 Accordingly, the main object of the invention is to provide a system for broadcasting information and alarm messages to selected users in a heterogeneous data transmission network such as an IP network .

 Another object of the invention is to provide a heterogeneous data transmission network such as an IP network wherein at least a server can broadcast information and alarm messages to a list of users defined by their profiles previously stored in a profile table.

Therefore, the invention relates to a system for broadcasting alarm messages from a server to a list of users among a plurality of multi-platform users sharing the server in a data transmission network operating under Internet Protocol (IP) and using the Java language. This system comprises a profile table which contains the profiles of each user, and processing and transmitting means which enable an administrator associated with the server to transmit alarm messages to the users of the list wherein the users have been selected by selecting profiles in the profile table, the alarm messages being displayed on the screen of the workstation associated with each selected user if the workstation is running

Detailed Description of the Invention

The objects, features and advantages of the invention will become clear from the following description in reference to the accompanying Figure 1 representing schematically a block-diagram of a user connected through an IP network to its server provided with a system for broadcasting messages according to the invention. As illustrated, a user application 10 is connected to a node 12 of an IP network 14 and can transmit data over the network to any other user application by using a server 16 connected to a node 18 of network 14.

Server 16 includes a Processing Unit 20 which handles the server and is also used to process all the operations controlled by an administrator entering the server via an administrator interface 22. Server 16 also comprises a System Network Message Protocol (SNMP) Interface 23 to monitor defined machines, a Profile Table 24 for the registration of the user profiles, an Alarm Scheduler 26 and a Message Sender 28 connected to node 18.

When a user is connected for the first time to the server, he provides data about the team in which he is integrated, his centers of interest, etc. which enable a profile to be created. Such a profile

is registered in Profile Table 24 and can be used by the administrator to send messages to the user. Note that the profile can be modified at any time at the request of the user.

By means of a new application written in Java language (Java alarm program) and run by Processing Unit 20, messages can be sent to any user connected to server 16 such as User 10 whatever the platform he is using, AIX, SUM, OS/2, DOS, Windows 95, etc. The messages can be either manually sent, or automatically sent, or can be standalone alarm functions.

A message or an alarm can be manually sent when the server administrator writes the message (or alarm) on Administrator Interface 22 and initiates the transmission thereof to a list of users whose profile has been selected in Profile Table 24. Then, the message is sent by Message Sender 28 over the network to all running workstations corresponding to the selected profile. On the user workstation, the Java alarm program receives the message (or alarm) and displays it on the foreground on the user screen, and an alarm tune is also played. Once the message is read, the user presses the OK key and the program switches in the background. Then, the Java alarm program sends back to server 16 an acknowledgment which can be used for statistic purposes on the server.

Messages can also be generated automatically from server 16. In such a case, a message or an alarm is previously written by the administrator and stored in the memory of Processing Unit 20. At the same time, the administrator defines the profile of the users to which such a message or an alarm must be sent when a condition or an event occurs. Thus, the message can be used to monitor specific resources via SNMP Interface 23, an alert message being sent by Message Sender 28 when one of those resources comes down or becomes unavailable. Information messages can also be broadcast to a list of users when an event is triggered, such as the message « staff meeting in 10 minutes » sent to all members of a team every Monday at 9:50 am. For this type of alert message

triggered by an event, the transmission of the message is scheduled in Alarm Scheduler 26 by the administrator.

The standalone alarm functions are used to detect when the server is out. In such a case, a message is scheduled in Alarm Schedule 26 to be regularly sent to the users.

- 5 If the user is no longer available, no message is received by the user who knows that the server is out of work.

The use of standalone alarm functions can be enhanced if the list of events and monitoring servers were downloaded directly into the Java alarm program at the beginning and refreshed once a change is made in the alarm server. An advantage is to determine more precisely the connection problem. For example, if the server is the only server which cannot be contacted, there is a server problem or if all the monitored servers cannot be contacted, there is a network problem and the message will be different.

What is Claimed:

1 1. System for broadcasting alarm messages from a server to a list of users among a plurality of
2 multi-platform users sharing the server in a data transmission network operating under Internet
3 Protocol (IP) and using Java language, said system being characterized in that it comprises:

4 a profile table containing profiles of each one of said plurality of users; and

5 processing and transmitting means enabling an administrator associated with said server to
6 transmit alarm messages to the list of users wherein said users have been selected from said profile
7 table, said alarm messages being displayed on a screen of a workstation associated with each selected
8 user if said workstation is running.

1 2. The system according to Claim 1, wherein said processing and transmitting means comprise a
2 processing unit operating under the control of a Java alarm program and a message sender
3 transmitting directly said alarm messages over said network.

1 3. The system according to Claim 2, wherein said alarm messages are written and manually sent
2 by the administrator when necessary.

1 4. The system according to Claim 2, wherein said alarm messages previously written by the
2 administrator are automatically sent by said processing and transmitting means at the occurrence of
3 a condition or an event.

1 5. The system according to Claim 4, wherein said alarm messages are automatically sent when
2 any specific resource monitored by a System Network Message Protocol (SNMP) via a SNMP
3 interface comes down or becomes unavailable.

1 6. The system according to Claim 4, wherein said alarm messages are automatically sent at the
2 occurrence of an event scheduled in an alarm scheduler by said administrator.

1 7. The system according to Claim 2, wherein said alarm messages are standalone alarm functions
2 used to detect when said server is out of work.

1 8. A method of broadcasting alarm messages from a server to a list of users among a plurality of
2 multi-platform users sharing the server in a data transmission network operating under Internet
3 protocol (IP) and using Java, comprising the steps of:

4 profiling in a profile table each one of said plurality of users;

5 processing an alarm message by an administrator associated with the server; and

6 transmitting said alarm message to the list of users wherein said users have been selected from
7 said profile table, said alarm message being displayed on a screen of a workstation associated with
8 each selected user if said workstation is on.

1 9. The method according to Claim 8, wherein said steps of processing and transmitting comprise
2 operating a processing unit under the control of a Java alarm program and a message sender
3 transmitting directly said alarm messages over said network.

1 10. The method according to Claim 9, wherein said alarm messages are written and manually
2 sent by the administrator when necessary.

1 11. The method according to Claim 9, wherein alarm messages previously written by the
2 administrator are automatically sent by at the occurrence of a condition or an event.

1 12. The method according to Claim 11, wherein said alarm messages are automatically sent when
2 any specific resource monitored by a System Network Message Protocol (SNMP) via a SNMP
3 interface comes down or is unavailable.

1 13. The method according to Claim 11, wherein said alarm messages are automatically sent at the
2 occurrence of an event scheduled in an alarm scheduler by said administrator.

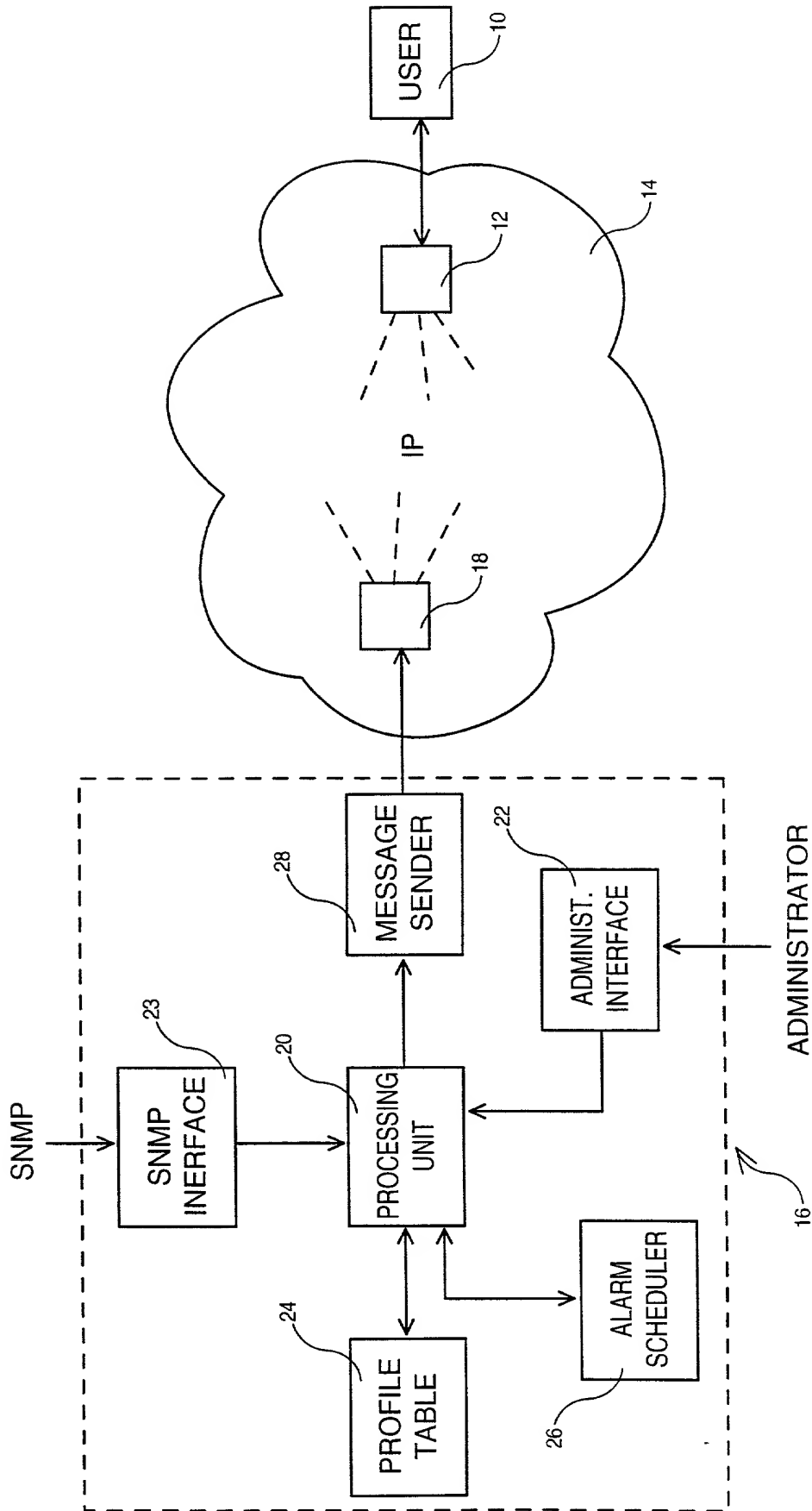
1 14. The method according to Claim 9, wherein said alarm messages are standalone alarm
2 functions used to detect when said server is out of work.

A METHOD AND SYSTEM FOR BROADCASTING ALARM MESSAGES TO SELECTED USERS OF AN IP NETWORK

Abstract

A system broadcast alarm messages from a server to a list of users among a plurality of multi-platform users sharing the server in a data transmission network which operates under Internet Protocol (IP) and uses the Java language. The system comprises a profile table containing the profiles of each user, a processing unit and a message sender enabling an administrator associated with the server to transmit alarm messages to the users of the list wherein the users have been selected by selecting profiles in the profile table. The alarm messages are displayed on the screen of the workstation associated with each selected user if this workstation is running.

1/1



Declaration and Power of Attorney for Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

A METHOD AND SYSTEM FOR BROADCASTING ALARM MESSAGES TO SELECTED USERS OF AN IP NETWORK

the specification of which (check one)



is attached hereto.



was filed on _____ as Application Serial No. _____.

I hereby state that I have reviewed and understand the contents of the above- identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):			
Number	Country	Day/Month/Year	Priority Claimed
99480066.0	Europe	08/10/98	Yes

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information material to the patentability of this application as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S. Applications:		
Serial No.	Filing Date	Status

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

A.B. Clay, Reg. No. 32,121; G. M. Doudnikoff, Reg. No. 32,847; E. H. Duffield, Reg. No. 25,970; J. W. Herndon, Reg. No. 27,901; J. S. Ray-Yarletts, Reg. No. 39,808;

Send all correspondence to: A. Bruce Clay
IBM Corporation, Dept. T81/062
3039 Cornwallis Road
RTP, NC 27709
919-254-6717
FAX: 254-4330

(1) Inventor: **Olivier Foncarnier**

Signature:

Date

08/13/99

Residence:

147 Avenue des Poilus
06140 Vence
France

Citizenship:

French

Post Office
Address:

Same